

## INFERTILITY IN WOMEN - CLASSIFICATION, SYMPTOMS, CAUSES AND FACTORS, RECOMMENDATIONS FOR WOMEN

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**Abstract.** *In this article we will detail about: Signs and Symptoms of Infertility in Women, Causes of Infertility in Women, Causes of Secondary Infertility in Women, Factors of Infertility, Genetic Factors of Infertility, Levels of Infertility, Recommendations for Women When Infertility Is Suspected!*

**Key words:** *Causes of secondary infertility in women, Infertility factors, Genetic factors of infertility, Levels of infertility, Recommendations for women when infertility is suspected.*

### БЕСПЛОДИЕ У ЖЕНЩИН - КЛАССИФИКАЦИЯ, СИМПТОМЫ, ПРИЧИНЫ И ФАКТОРЫ, РЕКОМЕНДАЦИИ ДЛЯ ЖЕНЩИН

**Аннотация.** *В этой статье мы подробно расскажем о: Признаках и симптомах бесплодия у женщин, причинах бесплодия у женщин, причинах вторичного бесплодия у женщин, факторах бесплодия, генетических факторах бесплодия, уровнях бесплодия, рекомендациях для женщин при бесплодии. Подозревается!*

**Ключевые слова:** *Причины вторичного бесплодия у женщин, Факторы бесплодия, Генетические факторы бесплодия, Уровни бесплодия, Рекомендации для женщин при подозрении на бесплодие.*

## INTRODUCTION

Infertility in women (female infertility) is the inability of women of sexually mature age to become pregnant as a result of regular penetration of viable, active spermatozoa into the reproductive organs through artificial or natural means for a year. Also, infertility is diagnosed even if the pregnancy always ends with miscarriage. Infertile marriage is recorded in 10-20% of cases.

### WHAT IS STERILITY?

Infertility in women should not be confused with the inability to carry a pregnancy, because in the case of inability to carry a mature oocyte is successfully fertilized by a spermatozoon, but the pregnancy ends at the stage of embryogenesis, which is the result of an abortion or miscarriage.

If the female sexual partner has non-viable, weak spermatozoa detected by laboratory methods, or if they are absent at all, then the woman is not considered infertile.

Infertility problem. The problem of infertility is more serious now than it was a few centuries ago. The sexual revolution is seriously responsible, not least because it spreads infectious diseases. And the desire to have children is decreasing among young people, and the delay in pregnancy is increasing. If we consider all infertile couples to be 100%, 33.3% of couples will have the male infertile, 33.3% of the couples will have the female infertile, and the remaining couples will have both sides infertile.

### METHOD AND METHODOLOGY

The causes of infertility can be defects in the development of the reproductive system, dysfunction of the sexual organs, severe poisoning of the body and general diseases, as well as mental and neurological diseases. Infertility itself is not considered a separate disease, it always

occurs as a result of various other diseases of the body. The main cause of female infertility is inflammatory diseases.

## **PHYSIOLOGY OF MENSTRUAL CYCLES**

Infertility can occur in both normal and disturbed menstrual cycles. A woman's natural menstrual cycle lasts 21-35 days and consists of three consecutive stages.

Follicular stage — egg maturation (at least 7 days and no more than 22 days);

The ovulatory stage with maturation and release of mature oocyte, the beginning of the fertile period;

Lutein — catabolism, yellow body stage (13 — 15 days).

A few days before and after ovulation is called the fertile period (phase), during which the probability of pregnancy is the highest. Pregnancy cannot occur before and after this period! However, it is necessary to understand that this stage occurs in different periods of menstruation in different women. If the cycle does not end with pregnancy, then the body is preparing for the next period under the influence of estrogen.

## **CLASSIFICATION OF STERILITY**

There will be infertility:

Primary - pregnancy has never occurred (congenital gynecological anomalies) or (complications of female genital organs) before or after menarche (first menstrual bleeding);

Secondary - inability to re-fertilize after the first successful pregnancy, it can be absolute (without treatment) or relative (with treatment).

In some sources devoted to the study of the physiology and pathophysiology of the female genital area, the concept of infertility is supplemented by the following types:

Physiological. Infertility in early youth (before puberty) and post-climactic (after menopause) is considered normal.

Optional. Or consciously chosen infertility - the use of medication (termination of pregnancy by taking drugs) or physical (spiral, other) devices.

Temporarily. Long-term stress, as a result of the weakness of the body after or during the illness. Also, some experts consider lactating amenorrhea - inhibition of ovulation during the initial period of regular breastfeeding - as temporary infertility.

Permanent. Removal of female genitals in whole or in part is the result of surgical intervention.

## **SYMPTOMS AND SIGNS OF INFERTILITY IN WOMEN**

The most important sign of infertility in women is the inability to get pregnant for a year or more in the presence of favorable conditions for pregnancy, in particular, such conditions:

### **Regular sex;**

A sexual partner with a good spermogram;

Complete, long rejection of contraceptives;

Be between the ages of 20 and 45.

Infertility often does not have a pathognomonic (main, clear) symptom and is manifested without symptoms or with indirect symptoms. Signs of infertility are determined by taking an anamnesis, examination, physical, laboratory and instrumental studies.

### **ANAMNESIS**

Specific symptoms associated with regular cycle disorders are studied: long or short-term, painful, heavy bleeding, with the separation of foreign bodies. Infertility can be estimated based on indirect symptoms characteristic of infectious, non-infectious and surgical diseases.

## **PHYSICAL EXAMINATION**

Possible symptoms of infertility in physical examinations in the clinic:

Body mass index is less than 20 or more than 26;

The condition of the skin and fetus with symptoms of endocrine disorders;

Unsatisfactory level of development of mammary glands;

In bimanual gynecological palpation, signs of pain, density in the small pelvic organs of a woman;

Symptoms of gynecological diseases when the cervix is viewed through a vaginal mirror, colposcopy.

## **LABORATORY AND INSTRUMENTAL METHODS**

In the course of laboratory and instrumental studies, symptoms indicating the presence of infertility are determined by the following:

Infectious screening for sexually transmitted diseases (STDs);

Hormonal screening to exclude endocrine infertility;

Ultrasound examination of a woman's small pelvis, thyroid gland - hormonal infertility;

Hysterosalpingography (GSG) is an X-ray examination to exclude symptoms of uterine tube obstruction;

## **RESEARCH RESULTS AND DISCUSSION**

MRI to detect brain tumors (on the Turkish side) may have slowed down the production of hormones that control the menstrual cycle;

Spiral computed tomography (SCT) of the pelvic organs - anatomical causes of infertility;

Laparoscopy (visual examination of the organs of the abdominal cavity) - tube-peritoneal infertility, adhesions, uterine tumors, ovarian retention cysts;

Hysteroscopy (examination of the walls of the uterine cavity) - uterine tumors, inflammation, ulcers of the uterine walls.

## **CAUSES OF STERILITY IN WOMEN**

Female infertility is associated with many specific reasons (factors). The reasons are not always clear. In some cases, they are not diagnosed or they combine with each other and increase the negative impact on the woman's body.

If we summarize known causes (factors) of infertility, we can distinguish several large groups - causes of infertility:

Congenital anomalies of reproductive organs.

Acquired in the reproductive organs, originating from:

anatomical and morphological changes;

functional disorders;

metabolic imbalance.

The information presented above reflects specific (specific) causes of female infertility. After the age of 35, the risk of infertility increases, especially in women who have not given birth before.

There are two reasons for decreased fertility not related to previous gynecological diseases:

Slowing down of physiological processes with age;

Long-term use of contraceptives.

## **STERILITY DUE TO CONTRACEPTIVE MEANS**

There are conflicting opinions about the use of hormonal contraceptives in the medical literature.

Proponents point out that the use of such means is useful due to the "rebound effect" after

canceling the reception of hormonal contraceptives. That is, canceling the factors that stop the process of fertilization, stimulates the sharp release of estrogens, due to which the probability of pregnancy increases. In some cases, it really is.

On the other hand, there have been cases of temporary or permanent decrease in fertilization after long-term use of contraceptives. Undoubtedly, the truth lies between the two. In order to avoid the negative effects of hormonal drugs, it is necessary to follow the advice of a gynecologist. It is possible to combine different methods of contraception, and then they will not be one of the causes of infertility.

## **CAUSES OF SECONDARY STERILITY IN WOMEN**

To determine the causes of infertility, more women who have successfully conceived before turn to help. Long-term inability to conceive again is called secondary female infertility. If we do not take into account the voluntary refusal of pregnancy and the age factor, the most obvious causes of secondary infertility are transmitted infectious diseases, including gynecological diseases with infectious or non-infectious etiopathogenesis.

## **DEGREES OF STERILITY**

In medicine, the etymological meaning of the word "level" means the size of the comparison, which differs in the intensity of pathological processes. The use of the term is appropriate when comparing certain (specific) pathological processes in a group of patients with a similar diagnosis. Often, in the available literature, infertility is described as type I and II.

1st degree infertility in women. Or infertility I - this means that a woman who has not given birth before cannot get pregnant. Usually, a woman is considered infertile if she does not become pregnant after one year of regular sexual intercourse without using contraceptives. The causes of infertility I are indicated in the text above (see the classification of infertility).

2nd degree infertility in women. Or infertility II, which refers to the inability of women who have previously given birth or become pregnant. The period of infertility is measured from the first attempts to conceive. Usually after a year. The II causes of infertility are listed above (see the classification of infertility).

## **CONCLUSION**

Infertility of the 3rd degree in women - a term that defines the degree of inability to conceive, is not used in the existing literature.

## **RECOMMENDATIONS FOR WOMEN WITH SUSPECTED INFERTILITY**

Experts say that in order to maximize the chances of successful fertilization, it is necessary to try to get pregnant from the 11th to the 18th day of the menstrual cycle. It should be remembered that the calculation of the first day starts from the first day of menstruation. It is not recommended for men to ejaculate more than once every 2 days, because in this case, the maximum concentration of sperm is kept. Neither partner should use lubricant.

And a woman should not wash immediately after sex. In addition, experts recommend having sex in the "missionary" position to get pregnant, where a woman should lie on her back with her knees bent for 15-20 minutes after sex.

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